

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
13 January 2005 (13.01.2005)

PCT

(10) International Publication Number  
**WO 2005/003224 A1**

- (51) International Patent Classification<sup>7</sup>: **C08K 9/04**, (81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (21) International Application Number: PCT/GB2004/002792
- (22) International Filing Date: 30 June 2004 (30.06.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 0315409.3 1 July 2003 (01.07.2003) GB
- (71) Applicant (*for all designated States except US*): IMERYS MINERALS LTD [GB/GB]; Par Moor Centre, Par Moor Road, Par, Cornwall PL25 2SQ (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): GOODMAN, Howard [GB/GB]; 7 Fore Street, Tregony, Truro, Cornwall TR2 5RN (GB). LEGRIX, Anabelle, Huguette, Renee [FR/GB]; Tregears, Little Trevisco, St.Austell, Cornwall PL26 7QL (GB).
- (74) Agent: BROWN, David, Leslie; Haseltine Lake, Redcliff Quay, 120 Redcliff Street, Bristol BS1 6HU (GB).
- (84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**  
— *with international search report*
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: PARTICULATE CLAY MATERIALS AND POLYMER COMPOSITIONS INCORPORATING THE SAME

(57) Abstract: A novel particulate clay material which is surface-modified with at least one organic compound comprising an organic portion such as an alkyl group and a basic portion such as an amine group has been found to be surprisingly useful as a filler material for a polymer composition, and especially a flame retardant polymer composition. The composition preferably further contains alumina trihydrate (ATH) and/or another flame retardant.

WO 2005/003224 A1